Amendments to the Abstract:

Please replace the Abstract on page 31 of the present application with the following Abstract. A clean copy of the Abstract identified as page 31 is attached for scanning purposes by the USPTO. No new matter has been added.

~~The invention relates to a~~ A_ medical X-ray device 5 arrangement for producing three-dimensional information of an object 4 in a medical X-ray imaging. ~~The medical X-ray device 5 arrangement~~ comprises~~:~~ an X-ray source 2 for X-radiating the object from at least two different directions;_a detector 6 for detecting the X-radiation to form projection data of the object 4; a computational device ~~means~~ 15 for modelling the object 4 mathematically utilizing the projection data to solve the imaging geometry and/or the motion of the object, where the solving concerns either some or all parts of the imaging geometry and/or the motion of the object. The computational device ~~and the medical X-ray device 5 arrangement comprises means~~ 15 ~~for utilizing~~ utilizes said projection data and said mathematical modelling of the object in Bayesian inversion based on Bayes' formula

$$p(x,\theta \mid m) = \frac{p_{pr}(\theta)p_{pr}(x)p(m \mid x,\theta)}{p(m)}$$

to produce three-dimensional information of the object.